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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,414	07/02/2001	Jun Matsuzaki	Q63842	8685

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/23/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/806,414

Applicant(s)

MATSUZAKI ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 01 August 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 15-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 15, the scope and meaning of "in that each of said end portion auxiliary groove portions resides in a quadrant different from the quadrant in which said central auxiliary groove portion resides" is unclear. It would require pure speculation as to how quadrants would be defined for the claimed substantially quadrilateral land portions. For example: It is unclear if the quadrants are defined by a y axis parallel to the circumferential direction and a x axis parallel to the axial direction. Another example: It is unclear if the quadrants are defined by a y axis parallel to the straight central auxiliary groove portion and an x axis perpendicular to the y axis. In each of the above examples, the location of the origin is unclear.

As to claim 30, it is unclear what additional limitation is being claimed.

- 3) Claim 30 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 30 (which depends on claim 15) fails to further limit because the subject matter therein is already inherently required by claim 15.

- 4) The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5) Claims 15-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 15, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of "in that each of said end portion auxiliary groove portions resides in a quadrant different from the quadrant in which said central auxiliary groove portion resides". The original disclosure fails to describe / define quadrants. For example: The original disclosure fails to define quadrants using a y axis parallel to the circumferential direction and a x axis parallel to the axial direction. Another example: The original disclosure fails to define quadrants using a y axis parallel to the straight central auxiliary groove portion and an x axis perpendicular to the y axis. In each of the above examples, the original disclosure provides no guidance as to where the origin should be located. The original disclosure fails to reasonably convey locating the end portions in quadrants different from the quadrant in which the central portion is located. Instead, the original disclosure discloses locating the central portion and the end portions in a block as shown for example in figure 8.

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In the response filed 8-1-03, applicant refers to figure 8 and then describes quadrants. Although figure 8 shows a dotted shorter diagonal line, figure 8 does not show two perpendicular lines forming quadrants.

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7) **Claims 15-23 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landers (US 5824169) in view of at least one of Koyama et al (US 6003575), Nakayama et al (US 4078596) and Verdier (US 4031938).**

Landers discloses a pneumatic tire having a tread comprising two sets of main grooves (circumferential grooves 16 and lateral grooves 14) and sipes 17. The claimed auxiliary groove corresponds to sipe 17. The claimed end portions read on the end portions of the sipes 17 which connect a straight inclined portion of the sipe 17 to the circumferential grooves.

As to claims 15-23, it would have been obvious to one of ordinary skill in the art to connect the straight inclined central portion and straight end portions of Landers' sipe 17 smoothly such that the curved portion thereby defined has a radius of curvature since it is well known / conventional in the tire tread art to connect a straight portion of a sipe to another portion of the sipe using a curved portion defining a radius as evidenced by at least one of Koyama et al (figure 13), Nakayama et al (figure 3c) and Verdier (figures 2,3); it being emphasized that (1) Koyama et al shows sipes having rounded

corners (figure 13) as being an alternative to sipes having angled corners (figure 3), Nakayama et al suggests using curved portions each having a radius of curvature to connect straight portion 7a to straight portions 7b,7b (col. 7 lines 5-11) to prevent stress from being concentrated (col. 4 lines 1-5) and Verdier illustrates connecting a central portion to straight end portions of a sipe with curved portions wherein the central portion and end portion (like those of Landers et al) define an obtuse angle such that the curved portion is in a different "quadrant" than the end portions. The limitation of the straight central auxiliary groove portion being inclined in the same direction as that of the shorter diagonal line would have been obvious since Landers et al teaches arranging the sipes 17 in the middle portion of the blocks and in a direction opposite the direction of inclination of the lateral grooves to control the variation of the direction of principal lug stiffness to improve the lateral stability, the handling and the wear properties of the tire.

As to the dependent claims: As to claim 16, at least one of the secondary references (Koyama et al, Nakayama et al and Verdier) suggest the claimed radius. As to the remaining dependent claims, see Landers et al's teachings regarding the shape, size, orientation and location of the sipes 17. As to the length of the central auxiliary groove portion being less than 70% of the length of the shorter diagonal line (claim 17), note the length of the inclined portion of the sipe 17 shown and suggested by Landers et al. As to the claimed angle difference of  $\pm 20$  degrees (claim 18), Landers inclines the inclination portion of the sipe 17 at about the same angle as that for the shorter diagonal line (the angle therebetween therefore being about zero degrees). As to the limitation of the auxiliary grooves being arranged substantially on the shorter

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diagonal (claim 19), Landers et al shows at least for the small pitch blocks the inclined portion of the sipe 17 being on the shorter diagonal. See figures 1 and 3. As to the claimed depth at least 30% of the main grooves for the auxiliary grooves (claim 20), Landers et al suggests using depth h2 for sipes 17. As to angle less than 30 degrees (claim 21), Landers et al shows the end portions of sipes 17 as being inclined at about the same angle as the lateral grooves (the angle therebetween therefore being about zero degrees). As to the relative depths of the end portions and central portion (claims 22 and 23), note Landers et al's teachings regarding the depth of the sipes including the use of tie bars in the illustrated embodiment. As to claim 30 (obtuse angle), the end portion and central portion of Landers et al's sipe forms an obtuse angle..

#### **Allowable Subject Matter**

**8) Claims 24-29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.**

#### **Remarks**

9) As to only some of the priority documents being received in this 371 application, WIPO will be contacted for a copy of Japan 11/218002.

Applicant's arguments with respect to claims 15-30 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 8-1-03 have been fully considered but they are not persuasive.

As to Landers et al, applicant argues that the corner portions of Landers et al's sipe 17 do not have a radius of curvature. More properly, the claimed auxiliary groove and Lander et al's sipe have substantially the same configuration (central portion connecting end portions which open to grooves) and substantially the same orientation (central inclined portion being inclined along shorter diagonal line).

As to Koyama et al, applicant's arguments regarding acute angles being defined between the sipe components such that the central component and first component reside in the same quadrant are not persuasive since Landers et al's sipe 17 has sipe components joined together so as to define obtuse angles and Koyama et al teaches using rounded corners as an alternative to edged corners when joining sipe components together. Also note newly applied Verdier, which uses rounded corners to join sipe components defining an obtuse angle instead of an acute angle.

Applicant's arguments regarding Tsuda (sipe is curved along its entire length) are moot since Tsuda is no longer relied upon. Also note the newly applied Nakayama et al which expressly describes connecting a straight section 7a and straight sections 7b, 7b with curved portions and Nakayma et al's teaching that such curved portions are used at regions of the sipe in which concentration of stress is to be prevented.

10) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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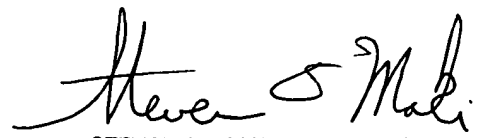
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki  
October 16, 2003

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
GROUP 1300  
AV 1733  
10-16-03